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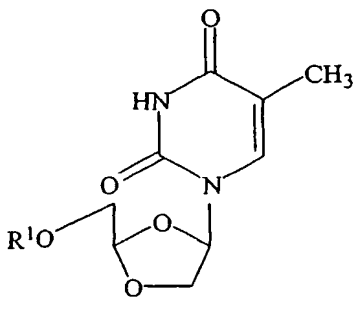
(54) Title: DIOXOLANE THYMINE AND COMBINATIONS FOR USE AGAINST 3TC/ AZT RESISTANT STRAINS OF HIV



(I)

(57) Abstract: The present invention relates to the use of a dioxolane thymine compound according to the chemical structure of Formula (I): where R^1 is H, an acyl group, a C_1-C_{20} alkyl or ether group, a phosphate, diphosphate, triphosphate or phosphodiester group, for use in the treatment of HIV infections which exhibit resistance to 3TC and/or AZT. Preferably, compounds according to the present invention are combined with at least one anti-HIV agent which inhibits HIV by a mechanism other than through the inhibition of thymidine kinase (TK). These agents include those selected from among nucleoside reverse transcriptase inhibitors (NRTI), non-nucloeoside reverse transcriptase inhibitors, protease inhibitors, fusion inhibitors, among others. These agents are generally selected from the group consisting of 3TC (Lamivudine), AZT (Zidovudine), (-)-FTC, ddI (Didanosine), ddC (zalcitabine), abacavir (ABC), tenofovir (PMPA), D-D4FC (Reverset), D4T (Stavudine), Racivir, L-D4FC, NVP (Nevirapine), DLV (Delavirdine), EFV (Efavirenz), SQVM (Saquinavir mesylate), RTV (Ritonavir), IDV (Indinavir), SQV (Saquinavir), NFV (Nelfinavir), APV (Amprenavir), LPV (Lopinavir), fuseon and mixtures thereof. The TK dependent agents, such as AZT and D4T, may be used in combination with one of the dioloxane thymine compounds according to the present invention, but the use of such agents may be less preferred. In preferred compositions according to the present invention, R^1 is preferably H or a C_2-C_{18} acyl group or a monophosphate group. Pharmaceutical compositions and methods of reducing the likelihood that a patient at risk for contract an HIV infection will contract the infection are other aspects of the present invention.

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